

# Revisiting the Relevancy Condition on internally headed relatives in Korean\*

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This paper revisits the Relevancy Condition on the Internally Headed Relative Clause (IHRC) construction in Korean and proposes a more valid rendition thereof. Specifically, it shows that, for a sentence instantiating the IHRC construction to be interpretable, the content of the embedded clause must bear a temporal intersection or an inferential relation to the content of the embedding clause. It will be further shown that, depending on their semantic relation to the embedding clause's content, IHRCs can be classified into two types, namely, (i) temporal and (ii) inferential, and the interpretive behavior of these two types of IHRCs parallels that of free adjuncts in English. This parallel will be taken to suggest that the Relevancy Condition is a reflex of a more general principle that governs the interpretation of complex clause structures that lack an overt connective.

## 1 Introduction

Ever since Yuki Kuroda's seminal works in the mid seventies (Kuroda 1975-77, reproduced in Kuroda 1992, Ch. 3), the Internally Headed Relative Clause (IHRC) construction in Korean (and also in Japanese) has received a great deal of attention in the literature (see, among others, B. Park 1994, Chung 1999, Y.-B. Kim 2002, Chung and Kim 2003, M. Lee 2004, M.-J. Kim 2004, J.-R. Lee 2006 for Korean; Tsubomoto 1991, Murasugi 1994, Hoshi 1995, Shimoyama 1999, Matsuda 2002, C. Kitagawa 2005 for Japanese). Extensive research has shown that the IHRC construction differs from the more familiar Externally Headed Relative Clause (EHRC) Construction both in form and meaning. In terms of form, it differs from the EHRC construction in that its head noun occurs internal to it, as opposed to external to it (and hence the name), and the relative clause (RC) is followed by a grammatical category *kes* or *no*, which is best analyzed as a pronominal or a determiner (Chung and Kim 2003, M.-J. Kim 2005 for *kes*; Shimoyama 1999 for *no*). This formal difference between the two types of RC constructions can be illustrated by comparing (1) and (2).<sup>1</sup> Here, the head nouns of the RCs are highlighted, roman subscripts indicate co-indexation and 'e' indicates a gap.

- (1) The EHRC construction in Korean:  
Jinho-nun [[ *e*<sub>i</sub> tomangka-n]-un **totwuk**<sub>i</sub>]-ul capassta.  
J.-TOP [[ \_\_\_ run.away-IMPRF]-REL **thief**]-ACC caught  
'Jinho caught a/the thief who was running away.'
- (2) The IHRC construction in Korean:  
Jinho-nun [[**totwuk**<sub>i</sub>-i tomangka-n]-un **kes**]<sub>i</sub>]-ul capassta.  
J.-TOP [[**thief**-NOM run.away-IMPRF]-REL **kes**]-ACC caught  
'A/the thief was running away and Jinho caught him (= the thief).'

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<sup>1</sup> In this paper, the following abbreviations are used for transcribing the Korean and Japanese data:

ACC: accusative case; AUX: auxiliary; COMP: complex predicate marker; DAT: dative case; DECL: declarative sentence; GEN: genitive case; LOC: locative particle; NEG: Negation; NOM: nominative case; IMPR: Imperfective aspect; PROG: progressive; PRF: perfective; PST: past tense; REL: relative marker; TOP: topic.

In terms of meaning, the IHRC construction differs from the EHRC construction in that it is subject to a pragmatic condition called the Relevancy Condition, which was identified by Kuroda (1976). A formal definition of this condition is given in (3).

- (3) **The Relevancy Condition** (Kuroda 1976-77, 1992: 147)  
 For a pivot-independent relative clause [i.e. an IHRC] to be acceptable, it is necessary that it be interpreted pragmatically in such a way as to be directly relevant to the pragmatic content of its matrix clause (my emphasis).

The effect of this condition can be seen in the contrast between (4) and (5). In view of (3), (4) is interpretable but (5) is not because, while the embedded clause of the former describes an event that is simultaneous with the event described by the embedding clause, the embedded clause of the latter describes an event that precedes the embedding clause's event and hence the IHRC bears a less direct relevance to the embedding clause's pragmatic content.

- (4) John-un [[sakwa<sub>i</sub>-ka thakca-wi-ey **iss-n**]-un kes<sub>i</sub>]-ul  
 J.-TOP [[apple-NOM table.top-LOC **exist-IMPRF**]-REL kes]-ACC  
 cip-e tul-ess-ta.  
 grasp-COMP lift-PST-DECL  
 'There was an apple on the table and John picked it up.'
- (5) \*John-un [[sakwa<sub>i</sub>-ka **ece** thakca-wi-ey **iss-te**]-un  
 J.-TOP [[apple-NOM **yesterday** table.top-LOC **exist-REMOTE.PST**]-REL  
 kes<sub>i</sub>]-ul **onul** cip-e tul-ess-ta.  
 kes]-ACC **today** grasp-COMP lift-PST-DECL  
 Intended: 'There was an apple on the table yesterday and John picked it up today.'

Note that the Relevancy Condition does not apply to the EHRC construction, as the grammaticality of (6) shows, in contrast with (5).

- (6) John-un [[ e<sub>i</sub> **ece** thakca-wi-ey **iss-te**]-un  
 J.-TOP [[     **yesterday** table.top-LOC **exist-REMOTE.PST**]-REL  
 sakwa<sub>i</sub>-lul **onul** cip-e tul-ess-ta.  
 apple-ACC **today** grasp-COMP lift-PST-DECL  
 'Today John picked up an apple that was on the table yesterday.'

Imposing the Relevancy Condition on the IHRC construction has proved to be effective in capturing the well-known context-sensitivity of the construction and cross-individual variability in grammaticality judgments. But this approach has also been subject to various criticisms. One criticism is that the notion 'relevancy' is not precise enough to provide a principled way of determining the interpretability of sentences (e.g., Fuji 1998, Y.-B. Kim 2002). Another criticism is that, despite its generality, the condition has empirical limitations, as we will see in section 2. Yet another criticism is that this approach does not address the more fundamental question of why such a pragmatic condition applies to the IHRC construction but not to the EHRC construction.

Due to these criticisms, attempts have been made to restate the Relevancy Condition in more formal terms (e.g., Fuji 1998, Y. Kim 2002). These works have shown that the components of the Relevancy Condition are not entirely pragmatic in nature; that is, semantic factors such as the aspect of the embedded clause's predicate also play a role in determining the interpretability of sentences instantiating the IHRC construction. But they have not as yet succeeded in offering an interpretability condition that captures the full spectrum of data. Consequently, authors tend to resort to Kuroda's original condition when explaining away the recalcitrant discourse-sensitivity of the construction (e.g., Shimoyama 1999, Chung and Kim 2003).

Given this state of affairs, there are at least three outstanding questions surrounding the IHRC construction even if we limit our attention to its semantics and pragmatics:<sup>2</sup>

- (i) Is it possible to formulate a more theoretically satisfactory definition of 'relevancy'?
- (ii) Can a more valid generalization than the Relevancy Condition be framed?
- (iii) What is the source of this construction-specific interpretability condition called the Relevancy Condition?

This paper takes up these questions and proposes answers to them. The gist of the proposal is that what underlies the Relevancy Condition on the IHRC construction is the need for a temporal or an inferential link between two event descriptions which stand in a subordinate-superordinate relation to each other. On the basis of this observation, a new typology of IHRCs will be proposed, which classifies IHRCs into two types, depending on their semantic relation to the content of the embedding clause. I demonstrate that a crucial difference between the two types of IHRC is whether the embedded clause describes a temporary state that holds at the time of the event described by the embedding clause or not. Another important finding will be that the interpretive behavior of IHRCs is paralleled by that of free adjuncts in English<sup>3</sup>. This parallel will be taken to suggest that the Relevancy Condition might be a reflex of a more general principle that governs the interpretation of complex clause structures that lack an overt connective (see Fabricius-Hansen 2006 for a good survey of such complex constructions). This principle is operative because, for two event descriptions to be conjoined without a connective, there has to be either a temporal overlap or an inferential relation established between them; otherwise interpreting the sentence will create too much strain on the hearer's part.

The remainder of this paper is organized as follows: in section 2, I identify the factors that constitute relevancy by reviewing the relevant literature. Here, I also propose a more valid interpretability condition on the IHRC construction than the Relevancy Condition. Section 3 presents additional arguments for the proposed generalization including the interpretive parallel between the IHRC construction and other subordinate constructions. Section 4 summarizes and concludes the paper.

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<sup>2</sup> The formal property of the IHRC construction has also proven to be challenging. This is because it is not clear how a noun phrase that occurs inside a RC is interpreted as an argument of the embedding predicate. Recently, however, this problem has received a relatively satisfactory solution which postulates an E-type pronoun as the mediator between the head noun of an IHRC and the embedding predicate (e.g., Hoshi 1995, Shimoyama 1999, Kim 2005). By contrast, the semantic and pragmatic property of the IHRC construction is yet to receive a satisfactory account.

<sup>3</sup> It will also be shown that IHRCs parallel non-restrictive RCs in English and Dutch as well but the discussion will be presented in a footnote, rather than in the text. See footnote 12.

## 2 What counts as ‘relevancy’?

### 2.1 Answers from the existing analyses

Although Kuroda (1976) does not offer a precise definition of relevancy, he shows concrete ways in which the Relevancy Condition can be satisfied: for instance, it can be satisfied if (i) the embedded clause’s event time is simultaneous with the embedding clause’s event time, (ii) the two events share the same location, or (iii) the embedded clause’s content is ‘motivationally’ or ‘purposively’ relevant to the embedding clause’s subject. For expository convenience, I follow Fuji (1998) in calling these three ways of satisfying the Relevancy Condition (i) the Simultaneity Condition, (ii) the Co-locationality Condition, and (iii) the Purposiveness Condition, respectively.

The effect of the Simultaneity Condition has already been illustrated by the contrast between (4) and (5): unlike (4), (5) is judged ungrammatical, because the event described by the embedded clause is not simultaneous with the event described by the embedding clause.

The effect of the Co-locationality Condition is illustrated by (7). In this sentence, the embedded clause describes an event that occurred at some time yesterday and the embedding clause describes an event that occurred at some time today. But the sentence is nevertheless judged acceptable because the two events involve the same physical location: the apple that Mary put on the table yesterday stayed there until John came along and picked it up today.

- (7) John-un [[Mary-ka ece sakwa-lul thakca-ey  
J.-TOP [[M.-NOM yesterday apple-ACC table-LOC  
**noh-a twu-Ø]-n kes]-ul onul mekessta.**  
**put-COMP AUX-PRF]-REL kes]-ACC today ate**  
‘Mary put an apple on the table yesterday and John ate it today.’

(adapted from Kuroda’s (9), p. 148)

Finally, the workings of the Purposive Condition are illustrated by (8) and (9), which are adapted from Kuroda sentences (1992: 151, (18), (19)). According to Kuroda, (8) is good but (9) is not because only the former can be interpreted in such a way that the embedded clause’s content is ‘purposively’ or ‘motivationally’ related to the matrix clause’s content. That is, John’s awareness of someone approaching him with an evil purpose may give him a strong motivation to be violent, but his awareness of someone coming to visit him from a remote place does not necessarily do so<sup>4</sup>.

- (8) John<sub>j</sub>-un [[Bill-i kuj-lul kongkyekha-lye-ko  
J.-TOP [[B.-NOM he-ACC attack-intend-COMP  
chac-a o-Ø]-n kes]-ul ttayli-e nwuphiessta.  
visit-COMP come-PRF]-REL kes]-ACC hit-COMP flooded  
‘Bill came to attack John and John flooded him.’

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<sup>4</sup> It is important to note that (9) is anomalous rather than ungrammatical. It can be judged acceptable or grammatical if, for instance, the discourse participants know that John has a mental problem which makes him rather aggressive at times. This suggests that the interpretability of the IHRC construction is highly discourse-sensitive, going beyond the realm of grammar.

- (9) #John<sub>j</sub>-un [[Bill-i men kos-ulopwuthe kuj-lul  
 J.-TOP [[B.-NOM remote place-from he-ACC  
 chac-a o-∅]-n kes]-ul ttayli-e nwuphiessta.  
 visit-COMP come-PRF]-REL kes]-ACC hit-COMP flooded  
 Intended: ‘Bill came to visit John from a remote place and John flooded him.’

Given these facts, it appears that satisfying the Relevancy Condition amounts to satisfying the three sub-conditions either individually or collectively. This raises the question of why satisfying these sub-conditions should matter in interpreting the IHRC construction. Kuroda offers a sensible answer to this question. He says that satisfying the three conditions matters because the IHRC construction is concerned with making the two events described by the embedded and embedding clauses form a superordinate event either in the physical domain or in the consciousness of a protagonist of the event described by the embedding clause (Kuroda 1992: 151). In light of these remarks, satisfying the Simultaneity or the Co-locationality condition can be viewed as a way of forming a superordinate event in the physical domain and satisfying the Purposiveness Condition can be viewed as a way of forming a superordinate event in the cognitive domain of a relevant individual, be it the subject of the embedding clause or the speaker or hearer of the discourse.

This way of approaching the Relevancy Condition leads us to see why the three subconditions figure as its most prominent manifestations. It also provides a broader perspective on the whole phenomenon. Given this, there is little doubt that the Relevancy Condition offers genuine insight into what regulates the interpretability of sentences instantiating the IHRC construction. As it stands, however, it has several empirical problems. One is that, despite its generality, it does not cover all cases. For instance, it cannot account for the contrast between (10) and (11) below. Suppose that these sentences were uttered in a context where little John had a fight with his sister Mary. He lost the fight, so he wanted to do something to upset her. Given the discourse context, both sentences satisfy the Purposiveness Condition because the embedded clauses’ contents seem to give a strong enough motivation for the embedding clauses’ agent to perform the action he did. But they both violate the Simultaneity Condition and also score the same with respect to the Co-locationality Condition, because it is not clear whether the two events described by the embedded and embedding clauses involve the same location or not. These tallying results predict the two sentences to be equally grammatical or ungrammatical, contrary to fact.

- (10) John-un onul [[Mary-ka ece inhyeng-ul  
 J.-TOP today [[M.-NOM yesterday doll-ACC  
 mantul-∅]-un kes]-ul nayta peliessta.  
 street-LOC-PRF]-REL kes]-ACC took and threw away.  
 ‘Mary made a doll yesterday and John threw it away today.’

- (11) \*John-un onul [[Mary-ka ece inhyeng-ul halwu congil  
 J.-TOP today [[M.-NOM yesterday doll-ACC day long  
 kaci-ko nol-∅]-un kes]-ul nayta peliessta.  
 have-COMP play-PRF]-REL kes]-ACC took and threw away.  
 ‘Mary played with a doll all day yesterday and John threw it away today.’

The fact that the Relevancy Condition alone cannot account for the contrast between (10) and (11) suggests that it merits revision even if one were to continue resorting to it. In addition, it makes us wonder whether there are identifiable components of relevancy other than simultaneity, co-locality, and purposiveness.

Y. Kim (2002) offers a partial answer to this question which can also account for the contrast between (10) and (11) (although he does not deal with these sentences). In essence, he claims that, in interpreting sentences containing an IHRC, the lexical aspect of the embedded clause matters, as well as other pragmatic factors, because the event described by the embedded clause should be *meaningfully* related to the event described by the embedding clause: two event descriptions can be meaningfully related to each other, if they share *pragmatically conspicuous arguments* which vary depending on the lexical aspect of the embedded clause's predicate. If the embedded predicate is an achievement or accomplishment verb in Vendler (1967) or Dowty's (1979) classification of verb meaning such as 'win a race' or 'build a house', then the pragmatically conspicuous shared argument will be the resultant theme, which comes into being as the result of the culmination of the event described by the sentence (pp. 556-8). If the embedded predicate is an action verb such as 'run' or 'play with a doll', on the other hand, then the shared argument will be the spatio-temporal argument in the sense of Kratzer (1995), i.e., the same time and location. In brief, this analysis predicts that if the embedded predicate is an achievement/accomplishment verb type, the embedded clause needs not satisfy the simultaneity or the co-locality condition but if the embedded predicate is an action verb type, then the embedded clause has to satisfy both conditions. When we revisit (10) and (11) in this light, we can readily see that their difference boils down to the difference of the embedded predicate's lexical semantics: while the embedded predicate of (10) is an accomplishment verb, that of (11) is an action verb. This means that (11), but not (10), has to satisfy both the simultaneity and the co-locality condition. But it actually violates the simultaneity condition and hence the ungrammaticality of the sentence.

This result clearly shows that Y. Kim's analysis adds an important insight into the factors that affect the interpretability of sentences instantiating the IHRC construction, but it is also confronted by empirical challenges. It predicts that, when the embedded verb is an activity verb, the sentence will be acceptable only if the embedded clause describes an on-going event that is simultaneous with the matrix event. But it turns out that sentences can be grammatical regardless of the embedded predicate's aspectual type if the predicate of the embedding clause means 'praise' or 'scold' and thereby readily establish a cause-effect relation between the contents of the embedded clause and the embedding clause. This problem can be illustrated by (12-14).

- (12) \*John-un [[Mary-ka wuntongcang-ul **tali-Ø**]-n kes]-ul  
 J.-TOP [[M.-NOM playground-ACC **run-PRF**]-REL kes]-ACC  
**kkeyan-ass-ta.**  
**hug-PST-DECL**  
 Intended: 'Mary ran on the playground and (after that) John hugged her.'
- (13) John-un [[Mary-ka wuntongcang-ul **tali-ko iss-n**]-un  
 J.-TOP [[M.-NOM playground-ACC **run-COMP cop-IMPRF**]-REL  
 kes]-ul **yatanchi-ess-ta.**  
 kes]-ACC **scold-PST-DECL**  
 'Mary was running on the playground and John scolded her (for that).'

- (14) John-un [[Mary-ka wuntongcang-ul **tali-Ø]-n kes]-ul  
 J.-TOP [[M.-NOM playground-ACC **run-PRF]-REL kes]-ACC  
**chingchanha-ess-ta.**  
**praise-PST-DECL**  
 ‘Mary ran on the playground and John praised her for that.’****

Why is it that there no restriction on IHRCs when they are embedded under ‘praise’ or ‘scold’ type verbs? I provide an answer to this question in the next section, in which I also propose a novel generalization on factors that govern the interpretability of the IHRC construction that builds upon the previous analyses but that overcomes their shortcomings.

## 2.2. A new analysis

I argue that the Relevancy Condition is essentially about connecting two clauses by establishing a temporal or inferential relation between them. By a temporal relation, I mean a temporal intersection relation; by an inferential relation, I mean a cause-effect or a concessive relation. I further argue that the construction is subject to such a condition because it has a complex clause structure wherein one clause is subordinate to another, despite the absence of an overt connective. This idea draws upon Kuroda’s insight that what is at stake in interpreting the IHRC construction is to ensure that the two events described by the embedded and embedding clauses form a superordinate event in the physical domain or in the cognitive domain of a relevant individual. Under the present analysis, when the two events are temporally related, they form a superordinate event in the physical domain, and when they are inferentially related, they form a superordinate event in the cognitive domain. This novel proposal is more formally represented in (15).

(15) **A novel interpretability condition on the IHRC construction**

Sentences that embed IHRCs in Korean (and in Japanese) can be interpretable iff either a temporal or an inferential link can be readily established between the embedded clause’s content and the embedding clause’s content.

a. A temporal link is established iff (i) the embedded clause describes a temporary state that holds at the time of the event described by the embedding clause, (ii) the semantic head of the IHRC is an argument of the embedded predicate, and (iii) the intended semantic head of the IHRC is in this state.

b. An inferential link is established iff (i) the embedded clause’s content stands in either a cause-effect or a concessive relation to the embedding clause’s content and (ii) the semantic head of the IHRC is an argument of the embedded predicate.

The proposed condition has an effect of classifying IHRC into two types. If a sentence embedding an IHRC satisfies (15a), then the IHRC will be classified as temporal. That is, it will be interpreted like a ‘while’ clause that restricts the content of the embedding clause. If a sentence embedding an IHRC satisfies (15b), then the IHRC will be classified as inferential and it will be interpreted like a ‘because’ clause or an ‘although’ clause that modifies the embedding

clause. Given this classification, it may appear that a temporal IHRC and an inferential IHRC differ from each other only in their interpretation. However, there is yet another important difference between them: while the head noun of a temporal IHRC has to receive a thematic role from the predicate of the embedded clause and also has to be in a temporary state that is described by the embedded clause, the head noun of an inferential IHRC only needs to receive a thematic role from the embedded predicate.<sup>5</sup>

### 2.2.1 The interpretation of temporal IHRCs

According to (15), for an IHRC to receive a temporal interpretation, it is crucial that it embeds a temporary state description. Since embedding a temporary state description is such an important requirement for a temporal IHRC, let me first outline what I take to be a temporary state description.

I assume that there are two types of temporary states, (i) lexical and (ii) grammatical, and they hold true of different types of sentences. Lexical states are assumed to be described by stage-level intransitive predicates in the sense of Carlson (1977) such as *sulphu-* ‘feel/be sad’ and *paykophu-* ‘feel/be hungry,’ which are defined as describing spatio-temporal slices of individuals<sup>6</sup>. It is further assumed that what they describe holds true of their highest arguments. For instance, the predicate *sulphu-* ‘feel/be sad’ assigns two thematic roles, theme and experiencer, but its denotation holds true of the experiencer, which is the higher argument between the two and hence is the highest argument of the predicate.

Grammatical states are described by aspect phrases. According to Parsons (1990), progressive sentences such as *John is throwing a ball* describe *in-progress states* and perfect sentences with telic predicates such as *John has thrown a ball onto the roof* describe *target states*. In-progress states hold true while the events described by the sentential predicates are in progress. Target states begin to hold immediately after the event described by the sentence has culminated. Parsons does not discuss of whom in-progress states hold true. But I posit that they hold true of every participant of the event described by the sentence, because when an event is in progress, every individual participating in the event presumably undergoes certain developmental stages. When it comes to *target states*, Parsons posits that they describe the state of the direct object, not the state of the agentive argument, after the event described by the sentence culminates<sup>7</sup>. For instance, the sentence *John has thrown a ball onto the roof* describes the state of the ball after the event of John’s throwing the ball culminates, i.e., its being on the roof. This state is considered temporary because it ceases to hold when the ball is removed from the roof (pp. 234-5).

According to the generalization (15a), when the embedded clause contains a stative stage-level predicate, the sentence will be interpretable as long as the semantic head of the IHRC

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<sup>5</sup> Shimoyama (2001) also observes that the intended head noun of Japanese IHRCs must bear a thematic role that is assigned by the embedded predicate (p. 143). But she does not point out that the semantic head of an IHRC can vary according to whether it receives a temporal interpretation or an inferential interpretation.

<sup>6</sup> When the predicate of the embedded clause of a sentence instantiating the IHRC construction is a stage-level verb that is also transitive, then the sentence will be interpretable only when the embedded clause has progressive aspect and hence it describes an in-progress state, or when it has perfect aspect and hence it describes a target state of the direct object. Since I analyze sentences whose embedded clauses have progressive aspect as describing grammatically temporary states, I differentiate cases where the embedded predicate is a transitive verb from those where it is an intransitive verb.

<sup>7</sup> Kamp and Reyle (1993) call this state a *result state* but I adopt Parsons’ terminology here.

has the property denoted by the embedded predicate. This prediction is borne out, as illustrated by (16). In this sentence, the embedded predicate *wuwulha* ‘feel depressed’ is a stative stage-level predicate and the semantic head of the IHRC *Mary* is the highest argument of this predicate. The embedded clause describes a temporary state of *Mary* and this state holds at the time of the embedding event. Hence the sentence is predicted to be interpretable.

- (16) John-un Mary-ka wuwulha-un kes-ul tallayssta.  
 J.-TOP M.-NOM feel.depressed-REL kes-ACC comforted  
 ‘Mary felt depressed and John comforted her.’

When the embedded clause describes an in-progress state, the sentence is predicted to be interpretable regardless of the semantic head of the IHRC, as long as it bears a thematic role in the eventuality described by the embedded clause. In fact, the semantic head can even be a plural individual that consists of more than one event participant, as illustrated by (17).

- (17) Context: John has a cat named Sophie who likes to play with dolls but he doesn’t like her doing that.  
 John-un [[Sophie-ka inhyeng-ul halwu congil kaci-ko  
 J.-TOP [[S.-NOM doll-ACC day long have-COMP  
 no-n]-un kes]-ul nayta peliessta.  
 play-IMPRF]-REL kes]-ACC took it and threw away.  
 ‘Sophie<sub>i</sub> was playing with a doll<sub>j</sub> and John threw it<sub>i</sub>/her<sub>j</sub>/them<sub>i+j</sub> away.’

It is important to note that when the embedded clause’s aspect is changed to perfective, the interpretability of the sentence degrades remarkably, as shown in (18).

- (18) ??John-un [[Sophie-ka inhyeng-ul halwu congil kaci-ko  
 J.-TOP [[S.-NOM doll-ACC day long have-COMP  
 nol-Ø]-un kes]-ul nayta peliessta.  
 play-PRF]-REL kes]-ACC took it and threw away.  
 Intended: ‘Sophie<sub>i</sub> played with a doll<sub>j</sub> and John threw it<sub>i</sub>/her<sub>j</sub>/them<sub>i+j</sub> away.’

The above sentence is not so good because the embedded clause does not describe a temporary state that holds at the time of the embedding event and thus the IHRC cannot receive a temporal interpretation. Given this, the only way to make sense of the sentence is to assign an inferential interpretation to the IHRC. But such an interpretation is not readily available in a neutral context. Furthermore, the sentence is only marginally acceptable even if it is uttered in a situation where Sophie played with a doll all day long, upsetting John, so he did something to punish her. This suggests that the discourse context has only a limited effect on the interpretability of sentences containing an IHRC. We will come back to this topic in the next section.

Let us now turn to cases where the embedded clause describes a target state. According to the proposed generalization, when the embedded clause describes a target state, the sentence is predicted to be interpretable only if the head noun of the IHRC is the direct object of the embedded predicate (unless the IHRC can readily receive an inferential interpretation). Such a case is illustrated by (19), which is adapted from Fuji 1998. In this sentence, the intended head noun of the IHRC is *sakwa*, which is the direct object of the embedded clause. Since the

embedded predicate is telic and pluperfect, the embedded clause describes a target state of the apple after the culmination of the event in which Mary put it on a plate. This state holds at the time of the embedded event. Therefore, the sentence is predicted to be acceptable.

- (19) John-un onul achim [[Mary-ka ece sakwa-lul  
 J.-TOP this morning [[M.-NOM yesterday apple-ACC  
 cepshi-ey **noh-a twu-Ø]**-un kes-ul cipe.tullessta.  
 plate-LOC **put-COMP AUX-PRF]**-REL kes-ACC picked.up  
 ‘Mary had put an apple on a plate yesterday and after that John picked it up this morning.’

It is important to note that, given the descriptive generalization (15), (19) will be judged ungrammatical if the intended head noun is Mary. It is plausible to imagine that Mary is the name of a cat who does all sorts of goofy things. But this contextualization does not make the sentence judged grammatical. This is because, being the agent of the event described by the embedded clause, Mary is not in a target state that holds at the time of the embedding event. This prediction is borne out, as the ungrammaticality of (20) shows.

- (20) \*John-un onul achim [[Mary-ka ece sakwa-lul  
 J.-TOP this morning [[M.-NOM yesterday apple-ACC  
 cepshi-ey **noh-a twu-Ø]**-un kes-ul cipe.tullessta.  
 plate-LOC **put-COMP AUX-PRF]**-REL kes-ACC picked.up  
 Intended: ‘Mary had put an apple on a plate yesterday and John picked her up this morning (from wherever she was).’

The proposed analysis can readily account for why sentences are judged acceptable when the embedded sentence’s content is linked to the embedding clause’s content via a *resultant theme* in the sense of Y.-B. Kim (2002). As mentioned above, a resultant theme is defined as an entity in a beginning state that results from the culmination of the event described by the embedded clause (Y. Kim 2002: 556-7). Under our analysis, a resultant theme is called an incremental theme that is in a target state. Since any sentence whose embedded event contains an incremental theme is predicted to be interpretable, any sentence that contains a resultant theme will also be judged grammatical as well.

We can extend this analysis to so-called change relatives. Change relatives are called as such because they describe the change of a state in an object. They have been treated separately from IHRCs in the literature because they do not contain an overt NP that is interpreted as their head noun (Tonosaki 1993, Kitagawa 2005). To illustrate, take (21). According to our intuitions, what John ate is dried persimmon. But the embedded clause of this sentence does not contain the NPs that has such a meaning.

- (21) John-un [[Mary-ka **hongsi-lul** mal-li-Ø]-un  
 J.-TOP [[M.-NOM **ripe.persimmon-ACC** dried-CAU-PRF]-REL  
 kes]-ul mekessta.  
 kes]-ACC ate  
 ‘Mary dried a ripe persimmon and John ate it (= the dried persimmon).’

In light of the proposed analysis, this seemingly peculiar property of change relatives is not so peculiar, however, because they satisfy the descriptive generalization offered in (15): the embedded clause of (21), for instance, instantiates the causative-inchoative construction in which the verb is derived from a related adjective with the “cause to become ADJ” meaning (Parsons 1990: 120) and the semantic head noun of the IHRC bears the role of an incremental theme that is in a state that results from the culmination of the event described by the embedded clause, as formally represented in (22). Here, *e* and *s* range over events and states, respectively, *Cul* is shorthand for ‘culminates’<sup>8</sup>, and the highlighted part corresponds to the incremental theme.

(22) **The logical structure of the embedded clause of (21):**

$\exists e[\text{Cul}(e) \ \& \ \text{dry}(e) \ \& \ \text{Agent}(\text{Mary})(e) \ \& \ \exists e' \exists x[\text{Cul}(e') \ \& \ \text{Theme}(x)(e) \ \& \ \text{ripe\_persimmon}(x) \ \& \ \text{CAUSE}(e, e') \ \& \ \exists s[\text{Being-dried}(s) \ \& \ \text{Theme}(x)(s) \ \& \ \text{Hold}(s) \ \& \ \text{BECOME}(e', s)]]]]$

In light of this analysis, we can conclude that change relatives are, in fact, a sub-type of IHRCs and hence there is no need to put them under a different category.

### 2.2.2 The interpretation of inferential IHRCs

Let us now turn to examining how the proposed condition (5b) captures the way in which inferential IHRCs are interpreted. But let me first spell out how inferential relations are established between the embedded clause and the embedding clause.

As mentioned above, I posit that there are two types of inferential relations, a cause-effect relation and a concessive relation. A cause-effect relation can be most readily inferred to hold between the contents of the embedded clause and the embedding clause when the embedding predicate inherently carries ‘a V-ed X for doing Y’ kind of interpretation. This explains why sentences tend to be judged acceptable when the embedding predicate is a ‘praise/scold’ type. This relation can also be assigned when the embedded clause’s content is judged to provide a direct reason for the embedding clause’s content. A concessive relation can be established, on the other hand, when there is contrast between the contents of the embedded clause and the embedding clause, or when the embedding clause’s content comes as a surprise, given the embedded clause’s content.

Under the proposed analysis, a temporal link is established by grammatical components such as the lexical and grammatical aspect of the embedded predicate, whereas an inferential link is established by the combination of semantic factors and pragmatic factors such as the lexical semantics of the embedding predicate’s semantics, the discourse context, and the discourse participants’ world knowledge. This accounts for why there are cases in which sentences embedding IHRCs are judged fine even though there is no temporal intersection between the content of the embedded clause and that of the embedding clause, as we saw in (14). This is because, in such cases, language users are likely to accommodate by assigning a cause-effect or a concession relation to the contents of the embedded clause and the embedding clause.

To see how a cause-effect relation is assigned, consider (23-24). Here, the embedding predicates are ‘praise’-type and hence each sentence can readily receive a ‘V-ed X for doing Y’

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<sup>8</sup> This logical structure is based on Parsons’ (1990) a treatment of causative-inchoatives (pp. 121-123). See also Dowty (1979) for a similar treatment of causatives.

kind of interpretation. For this reason, the sentences are judged grammatical despite the fact that no temporal intersection holds between the contents of the embedded and embedding clauses.

- (23) John-un Bill-i cinancwu-ey kesicmal-ul ha-Ø-un  
 J.-TOP B.-NOM last week lie-ACC do-PRF-REL  
 kes-ul onul **yatanchi-ess-ta.**  
 kes-ACC today **scold-PST-DECL**  
 ‘Bill told a lie last week and John scolded him for that today.’
- (24) John-un Mary-ka wuntongcang-ul yel-pen talli-Ø-un  
 J.-TOP M.-NOM playground-ACC ten-times run-PRF-REL  
 kes-ul **sang-ul cwu-ess-ta.**  
 kes-ACC **prize-ACC give-PST-DECL**  
 ‘Mary ran on the playground ten times and John awarded her for that.’

Note that these sentences become uninterpretable if we change the embedding predicates to those that do not inherently induce a cause-effect relation, as illustrated in (25-27).

- (25) #/\*John-un Bill-i cinancwu-ey kesicmal-ul ha-Ø-un  
 J.-TOP B.-NOM last week lie-ACC do-PRF-REL  
 kes-ul onul **ttayli-ess-ta.**  
 kes-ACC today **hit-PST-DECL**  
 Intended: ‘Bill told a lie last week and John hit him for that today.’
- (26) \*John-un Mary-ka wuntongcang-ul yel-pen talli-Ø-un  
 J.-TOP M.-NOM playground-ACC ten-times run-PRF-REL  
 kes-ul **mwul-ul cwu-ess-ta.**  
 kes-ACC **water-ACC give-PST-DECL**  
 Intended: ‘Mary ran on the playground ten times and John gave water to her (to quench her thirst).’

The contrast between sentences (23-24) and (25-26) suggests that when there is no temporal link between the embedded clause and the embedding clause, the semantics of the embedding predicate plays a crucial role in determining the interpretability of the sentence. But this does not mean that it is the only determinant that is at work; a cause-effect relation can also be coerced if a linguistic expression that brings out such an effect is added to the sentence. For instance, we can improve upon the unacceptability of (25-26) by adding an adjunct to the embedding clause that coerces a cause-effect relation between the embedded and embedding clauses, as shown in (27-28). These sentences are judged good, because Bill’s telling a lie made John almost want to kill him by hitting him so hard<sup>9</sup> and, similarly, Mary’s running in the playground ten times made John offer water to her, for fear of her getting too thirsty.

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<sup>9</sup> My apologies for this rather violent example but it was inevitable to make the point without changing the original sentence too much.

- (27) John-un Bill-i cinancwu-ey kesicmal-ul ha-Ø-un  
 J.-TOP B.-NOM last week lie-ACC do-PRF-REL  
 kes-ul onul **cwuk-tolok** ttayliessta.  
 kes-ACC today **die-so.that** hit  
 ‘Bill told a lie last week and John hit him today so that he would die.’
- (28) John-un Maryi-ka wuntongcang-ul yel-pen talli-Ø-un  
 J.-TOP M.-NOM playground-ACC ten-times run-PRF-REL  
 kes-ul *e<sub>i</sub>* mok-malulkkapoa **mwul-ul** **cwuessta.**  
 kes-ACC \_\_\_\_\_ thirsty-for.fear.of **water-ACC** **gave.**  
 ‘Mary ran on the playground ten times and John gave water to her for fear of her being thirsty.’

We can also improve upon the acceptability of a sentence, albeit slightly, by changing the embedded clause’s content in such a way that it gives a stronger motivation for the agent of the embedding event. This is illustrated by (29). Imagine a context where a mafia organization wanted to punish one of its members named Sam for some wrong-doing he did. Given this context, (29b) is judged better than (29a), because Sam’s revealing a top secret of the organization can give the mafia a stronger motivation to kill him than his revealing merely an ordinary secret.

- (29) a. ??Ku k kayngtan-un Sam-i cocik-uy **pimil-ul**  
 that mafia-TOP S.-NOM group-GEN **secret-ACC**  
 nwuselha-Ø-un kes-ul cwukyessta.  
 reveal-PRF-REL kes-ACC killed.  
 Intended: ‘Sam revealed a secret of the mafia and they killed him for that.’
- b. ?Ku k kayngtan-un Sam-i cocik-uy **ilk-up pimil-ul**  
 that mafia-TOP S.-NOM group-GEN **first-level secret-ACC**  
 nwuselha-Ø-un kes-ul cwukyessta.  
 reveal-PRF-REL kes-ACC killed.  
 ‘Sam revealed a top secret of the mafia and they killed him for that.’

The pattern that emerges from the above paradigms accords well with Kuroda’s observation that sentences tend to be judged acceptable if the embedded clause’s content is “motivationally” or “purposively” related to the matrix clause’s content, as illustrated by the contrast between (8) and (9). But we can capture this pattern without positing a separate condition called the purposive condition, as Kuroda does, because it falls out rather naturally from the proposed condition (15b).

Turning now to illustrate a case where a concessive relation is assigned between the embedded clause’s content and the embedding clause’s content, consider (30) and (31). Here, given the embedded clause’s content, the embedding clause’s content is a bit unexpected. This is evidenced by the fact that the embedding clause can contain discourse particles such as *-eya* ‘only’ and *-to* ‘even’, which convey the speaker’s surprise at the sentence’s content. This rather unexpected content of the embedding clause relative to the content of the embedded clause enables the discourse participants to assign a concessive interpretation to the IHRCs and thereby to accept the sentences as grammatical.

- (30) John-un Mary-ka **sip-nyen-cen-ey** swul-ul mantul-Ø-un  
 J.-TOP M.-NOM **ten-year-before-LOC** liquor-ACC make-PRF-REL  
 kes-ul **onul(-eya)** mashi-ess-ta.  
 kes-ACC **today(-only)** drink-PST-DECL  
 ‘Mary made liquor ten years ago and yet John drank it (only) today.’  
 ‘Although Mary made liquor ten years ago, John drank it (only) today.’
- (31) John-un Bill-i cinancwu-ey kesicmal-ul ha-Ø-n  
 J.-TOP B.-NOM last week-LOC lie-ACC do-PRF-REL  
 kes-ul **yatanchi-ci(-to)** **ahn-ess-ta.**  
 kes-ACC **scold-ci(-even)** NEG-PST-DECL  
 ‘Bill told a lie last week and yet John didn’t (even) scold him.’  
 ‘Although Bill told a lie last week, John didn’t (even) scold him.’

### 2.3 Summary

In this section, I have proposed that what is at the heart of interpreting sentences instantiating the IHRC construction is to establish a temporal or an inferential link between the contents of the embedded clause and the embedding clause. In so doing, I have suggested that, despite the well-known context sensitivity of the IHRC construction, the possible interpretations its instantiations can receive fall into two types: (i) temporal and (ii) inferential. A temporal link is established when a set of semantic conditions are met; an inferential link is established when a set of both semantic and pragmatic conditions are met. This explains why both pragmatic factors and semantic factors seem to play a role in determining the interpretability of sentences instantiating the IHRC construction.

## 3. Further arguments for the two-way classification of IHRCs

The purpose of this section is to provide additional arguments for classifying IHRCs into the temporal type and the inferential type. Furthermore, it aims to show that the interpretive behavior of the IHRC construction parallels, albeit partially, that of the free adjunct construction (and also the non-restrictive RC construction) in English.

### 3.1 Truth-conditional differences between temporal and inferential IHRCs

A first argument for classifying IHRCs into two types is that there are truth-conditional differences between sentences depending on whether the IHRC instantiates the temporal type or the inferential type. To see this, compare (32) and (33). These two sentences are alike in that they both have a ‘praise/scold’ type verb *yatanchi-* ‘scold’ occurring as the embedding verb. But they are different from each other in that while the embedded clause of (32) has progressive aspect and hence describes an in-progress state holding at the time of the embedding event, the embedded clause of (33) has perfective aspect with an atelic predicate and hence describes neither an in-progress state nor a target state. Importantly, this aspectual difference gives rise to

different interpretive possibilities: as the English translations show, while a causal interpretation is obligatory for the IHRC in (33), it is only optional for the IHRC in (32). That is, whereas (33) can be verified only if John scolded Mary **because** she watched TV, (32) can be true even if John scolded Mary **while** she was watching TV, because she did something else, say, fighting with her younger brother Bill.

- (32) John-un Mary-ka thelepi-lul **po-ko** **issn-un** kes-ul  
 J.-TOP M.-NOM television-ACC **watch-COMP** **PROG-REL** kes-ACC  
 yatanchiessta.  
 scolded  
 Possible reading 1: ‘Mary was watching television and John scolded her for that.’  
 Possible reading 2: ‘Mary was watching television and John scolded her for doing something else (e.g., for having fought with her brother).’
- (33) John-un Mary-ka thelepi-lul **po-Ø-un** kes-ul  
 J.-TOP M.-NOM television- ACC **watch-PRF-REL** kes-ACC  
 yatanchiessta.  
 scolded  
 Possible reading: ‘Mary (had) watched television and John scolded her for that.’  
 Impossible reading: ‘Mary (had) watched television and John scolded her for something else (e.g., for having fought with her brother).’

The truth-conditional difference between the two sentences can be further confirmed by the contrast between (34) and (35), in which a phrase specifying the reason for John scolding Mary is inserted.

- (34) John-un Mary-ka thelepi-lul **po-ko** **issn-un** kes-ul  
 J.-TOP M.-NOM television-ACC **watch-COMP** **PROG-REL** kes-ACC  
**Bill-kwa ssawuess-ta-mey** yatanchiessta.  
**B.-with fight-DECL-say** scolded  
 ‘Mary was watching television and John scolded her for having fought with Bill.’
- (35) #John-un Mary-ka thelepi-lul **po-Ø-un** kes-ul  
 J.-TOP M.-NOM television-ACC **watch-PRF-REL** kes-ACC  
**Bill-kwa ssawuess-ta-mey** yatanchiessta.  
**B.-with fight-DECL-say** scolded  
 ‘Mary had watched television and John scolded her for having fought with Bill.’

Under the present analysis, the contrast between (32) and (33) finds a ready answer: in (32), the embedded clause describes a temporary state that holds at the time of the event described by the embedding clause, so the IHRC receives a ‘while’ clause-like interpretation, giving the whole sentence interpreted as ‘John scolded Mary for doing something *while* she was watching TV.’ However, the IHRC can also receive a ‘because’ clause-like interpretation as well, since the embedding verb is a ‘scold’ type, so an inferential link can be readily established between the contents of the embedded clause and the embedding clause. In the case of (33), on the other hand, the embedded clause does not describe a temporary state that holds at the time of the embedding

clause. This eliminates the possibility of establishing a temporal link between the contents of the two clauses. Hence, the only way to interpret the sentence is to give the IHRC a ‘because’ clause reading, rather than a ‘while’ clause reading.<sup>10, 11</sup>

### 3.2 Different behaviors in subordination

There is perhaps a less direct but equally compelling reason for treating temporal IHRCs and inferential IHRCs separately and it comes from the way in which ordinary subordination works. Descriptively speaking, non-temporary state descriptions can be subordinated to other sentences only when there is an inferential link between them, but there is no such restriction on temporary state descriptions; that is, they can bear either an inferential or a temporal relation to the superordinate clause. To illustrate, consider (36-37).

- (36) a. **\*When** John is handsome, I feel jealous of him  
 b. **Because** John is handsome, I feel jealous of him.
- (37) a. **When** John left, I cried  
 b. **Because** John left, I cried.

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<sup>10</sup> Chisato Kitagawa kindly informs me that a similar contrast is obtained by Japanese IHRCs as well. For instance, the following two Japanese sentences exhibit the same truth-conditional difference as (32) and (33).

- (i) John-wa Mary-ga terebi-o mite i-ru no-o sikat-ta.  
 J.-TOP M.-NOM TV-ACC watching be-IMPRF no-ACC scold-PST  
 Possible reading 1: ‘Mary was watching television and John scolded her for that.’  
 Possible reading 2: ‘Mary was watching television and John scolded her for doing something else (e.g., for having fought with her brother).’
- (ii) John-wa Mary-ga terebi-o mi-ta no-o sikat-ta.  
 J.-TOP M.-NOM TV-ACC watch-PST no-ACC scold-PST  
 Possible reading: ‘Mary (had) watched television and John scolded her for that.’  
 Impossible reading: ‘Mary (had) watched television and John scolded her for something else (e.g., for having fought with her brother).’

<sup>11</sup> Marcel den Dikken has pointed out to me that non-restrictive relative clauses in English and Dutch seem to exhibit a parallel behavior as well. For instance, the two English sentences in (i) show the same kind of interpretive differences as (32) and (33).

- (i) a. John scolded Mary, who was watching TV.  
 b. John scolded Mary, who had been watching TV.

While (ia) does not necessarily imply that John’s scolding Mary was caused by her watching TV, in (ib), there is an undeniably strong cause-effect relation between the two events. This contrast suggests that, while the non-restrictive relative in (ia) can easily support a ‘while’-type reading, (ib) does not.

In the literature, IHRCs in Korean (and Japanese) have been analyzed as non-restrictive RCs on the basis of the fact that they do not reduce the denotation of the semantic head noun and they instead tend to modify the event described by the embedding clause (Jung 1995, Shimoyama 1999, C. Kitagawa 2005). Given this, the parallel between the interpretive behavior of IHRCs and that of non-restrictive RCs in English does not come as a sheer surprise. Although the parallel merits further investigation, this observation strongly suggests that the IHRC construction in Korean and Japanese is not such an “exotic” construction. It further suggests that there is a systematic correlation between the interpretation of a non-restrictive RC and the aspect of its embedded clause.

The contrast between the sentences in (36) shows that a permanent state description ‘John being handsome’ can only be inferentially related to the embedding clause’s content. That is, it can be selected by *because* but not by *when*. On the other hand, the sentences in (37) show that a temporary state description ‘John left’ can be linked to the matrix clause’s content either temporally or inferentially. It is important to note that the difference between these sentences parallels what we just saw in (32) and (33), suggesting that there is reason to treat subordinate clauses differently depending on the type of eventualities they describe.

### 3.3 Parallels with free adjuncts in English

A third argument for treating temporal IHRCs separately from inferential IHRCs comes from a striking parallel between the IHRC construction and the free adjunct construction in English. The two constructions behave alike in at least two respects.

First, just as the semantic relation between an IHRC and the embedding clause can be inherently indeterminate, the relation between free adjuncts and their superordinate clauses can also vary depending on the discourse context (Kuroda 1976-77, 1992, and Shimoyama 2001: 123-4, fn. 29). To see this, consider the following examples. (What is inside the parentheses is considered a less prominent relation that can hold between the free adjunct and the matrix clause in a neutral context.)

- (38) simultaneity (or circumstance)  
**Walking out of the house**, John hit his hand against the wall.
- (39) temporal precedence (or causation)  
**Having given it full consideration**, John did not favor an open convention.
- (40) circumstance (or causation)  
**Listening to the radio**, John fell asleep.
- (41) concession (or circumstance)  
**Suffering from a severe cold**, John helped other people to move.

The other important parallel between IHRCs and free adjuncts is that they can both be classified into two types based upon the kind of state the embedded clause describes, despite the wide array of interpretations they appear to receive depending on the discourse context. IHRCs can be classified into temporal and inferential types, as we have seen thus far. Similarly, free adjuncts can be classified into *weak* and *strong* types, as proposed by Stump (1985). Weak free adjuncts contain stage-level predicates and strong free adjuncts contain individual-level predicates in the sense of Carlson (1977), which are essentially temporary state descriptions and non-temporary state descriptions, respectively. The two types of free adjuncts exhibit quite different interpretive behaviors. While a weak free adjunct interacts with quantificational elements which occur in the matrix clause, a strong free adjunct does not.

To see how a free adjunct interacts with a modal auxiliary that occurs in the matrix clause, consider (42). Here, the matrix clauses contain *would*. What is interesting about these sentences is that, while the free adjunct of the (b) sentence is interpreted as an *if*-conditional and thus

serves as the first argument of *would*, the free adjunct of the (a) sentence does not; father, it is interpreted like a *because*-clause. Since the only difference between the two sentences is whether the predicate of the free adjunct is individual-level or stage-level, we have reason to treat free adjuncts differently depending on their predicate types.

- (42) a. **Being a master of disguise**, Bill **would** fool everyone.  
b. **Wearing that hat**, Bill **would** fool everyone.  
(Stump 1985: 53, (9); my emphases)

Consider now the sentences in (43). Here, the matrix clauses of both sentences contain the relative frequency adverb (or an adverb of quantification) *sometimes* but the free adjuncts contain different types of predicates: the one in (a) contains an individual-level predicate whereas the one in (b) contains a stage-level predicate. Again, an interesting semantic difference emerges which is analogous to what we just saw in (42). While the adjunct of (43b) interacts with the frequency adverb by serving as its restrictor and thereby receiving a *when* clause interpretation, the adjunct of (43a) does not and it receives a *because*-clause-like interpretation instead.

- (43) a. **Being a sailor**, John **sometimes** smokes a pipe.  
b. **Lying on the beach**, John **sometimes** smokes a pipe.  
(Stump 1985: 185, (241); my emphases)

Finally, consider the sentences in (44). Here, the matrix clauses of both sentences contain no overt quantificational element but the free adjuncts receive rather different interpretations. While the adjunct of (44a) is interpreted like a *because*-clause, that of (44b) is interpreted like a *whenever*-clause. According to Stump, this interpretive difference arises because the matrix clauses of these sentences contain an implicit generalization operator and, while the adjunct of the (b) sentence interacts with it, the adjunct of the (a) sentence does not.

- (44) a. **Being a businessman**, John smokes cigars.  
b. **Lying on the beach**, John smokes cigars.  
(Stump 1985: 191, (294) & (293), respectively; my emphases)

These facts clearly show that there is a systematic difference between free adjuncts describing temporary states and those describing non-temporary states. Furthermore, they suggest that the seemingly peculiar interpretive behavior of the IHRC construction, namely, the correlation between the type of the state in the denotation of the embedded clause and the interpretation/interpretability of the entire sentence, is not so peculiar after all. Given that there is no genetic link between Korean/Japanese and English, it is probably not too farfetched to hypothesize that this interpretive property is shared by complex clause constructions across languages in which two event descriptions are connected to each other via some sort of relativization or nominalization, in the absence of an overt connective (see also Walpiri adjoined relative clauses as documented in Hale 1976).

## 4 Summary and conclusion

This paper has reexamined the Relevancy Condition on the IHRC construction in Korean (and Japanese). In so doing, it has investigated how grammatical factors and language users' inferences work together in interpreting sentences instantiating the IHRC. I have shown that the interpretability of such sentences is determined by the combination of three main factors: (i) whether the embedded clause describes a temporary state that holds at the time of the event described by the embedding clause, (ii) what is intended to be the head noun of the IHRC, and (iii) whether a cause-effect or a concessive relation can be readily inferred to hold between the contents of the embedded clause and the embedding clause. The first factor explains why the lexical aspect and grammatical aspect of the embedded predicate play a role in interpreting sentences containing IHRCs. The other two factors account for why the interpretation of the IHRC construction is so notoriously discourse-sensitive.

In addition to making these proposals, I have also demonstrated that there is a striking parallel between the IHRC construction and the free adjunct construction in English: in both constructions, the type of the state described by the subordinate clause affects the interpretive possibilities of the superordinate sentence. This parallel suggests that the Relevancy Condition on the IHRC construction is not a merely construction-specific pragmatic condition; rather, it may well be a manifestation of a more universal principle that governs the interpretation of complex clause constructions wherein two event descriptions are integrated with each other in the absence of an overt connective. I hope that future research will elucidate the precise nature of this constraint and the compositional process by which two event descriptions form one big event description while bearing either a temporal or an inferential relation to each other.

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